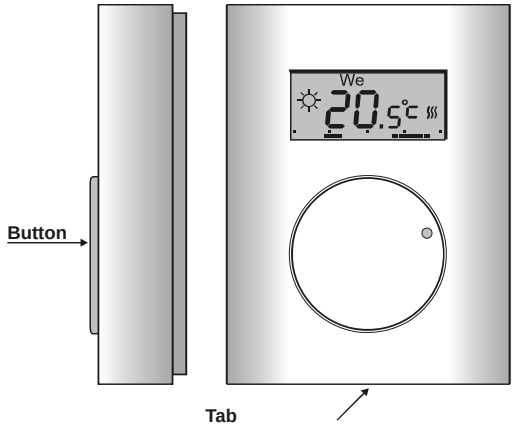
The TP-83 programmable wireless indoor thermostat

The TP-83 is a wireless indoor thermostat with a programmable weekly heating schedule. It is designed for indoor temperature regulation which balances economy with comfort. The device is capable of recognizing warm-up persistence characteristics (within 2 days) and will adjust the settings accordingly so that a high level of operational comfort is achieved. You need not find out how early the heating should start in order to get to a comfortable temperature at the desired time. The required timing is configured automatically.

Temperature adjustment can be performed by simply turning the setting knob.

When combined with an Oasis wireless security system (Jablotron), the following are possible:

- Switching the heating ON and OFF remotely (by mobile phone, remote control or Internet).
- Disabling the heating when windows are open.
- Informing the user about heating faults and frost threats (if the temperature drops below a pre-configured value a warning SMS is sent).
- Informing on the occurrence of fire (when the temperature is above a pre-configured value).



Installation

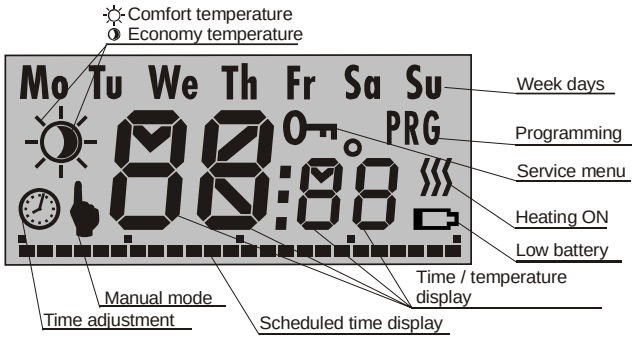
The TP-83 should be mounted in a dry indoor location. Choose a mounting location about 1.5 meters above the floor in an area with good air circulation. Avoid places with draughts, dead air spots and radiant heat from the sun or appliances. It should not be installed close to any metal structure or other objects that may obstruct radio signal transmissions.

1. Release the upper cover by pressing the plastic tab on the bottom side of the housing
2. Mount the back part on to the desired location.
3. Insert the battery (the polarity is marked on the holder).
4. Close the thermostat.

Enrollment

Install and connect the receiving unit to the heating system. If the receiving unit was purchased separately then the thermostat must be enrolled to it – enter enrollment mode on the receiving unit (see its manual) and either connect the battery to the thermostat or enter menu M1 (both operations cause an enrollment signal to be sent).

Symbols on the display



Adjustment and programming

All the required parameters can be configured in the adjustment menu using the knob. The menu is divided into the following parts:

M1	manual temperature-adjustment
M2	setting the economical or comfortable temperature, time adjustment
M3	weekly programming schedule
M4	service menu

You can enter the menu and scroll through M1 to M4 by pressing and holding the knob. The desired submenu is selected by releasing the knob.

Scrolling inside any particular menu M1 to M4 is done by turning the knob. The currently displayed parameter can be adjusted by pressing the knob briefly, turning the knob until the desired value is displayed, and confirming the setting by re-pressing the knob (this will also cause a return to the menu so that you can configure other parameters immediately). The adjustment menu is escaped from by pressing the knob while ***OK*** is displayed or automatically after approx. 30 seconds.

1. M1 – manual mode

If set to manual mode, the thermostat performs fixed temperature regulation regardless of the weekly schedule. The desired temperature can be set within the range of ***t Lo*** to ***t Hi***. The M1 menu is escaped from by pressing and holding the knob for 2 seconds.

Note: As mentioned above, entering the M1 menu causes an enrollment signal to be sent.

2. M2 – temperature & time setting

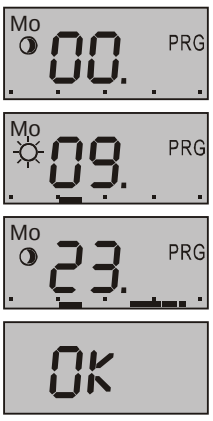
If the M2 menu is entered, turning the knob will scroll through the Economical temperature (◑), Comfortable temperature (☼) and Time (🕘) parameters followed by an OK option.

Each parameter can be entered by briefly pressing the knob. When ◑ or ☼ is entered the displayed temperature flashes and can be adjusted by turning the knob (re-pressing the knob confirms the setting). The Time parameter adjustment is similar but requires three steps – for the day, hour and minutes.

3. M3 – programming the weekly heating schedule

This mode allows you to program when the thermostat should switch between Day (☼) and Night (◑) operation. The heating schedule can be programmed either for each day separately or just for working days or just for the weekend or for all days together.

Enter the M3 menu, scroll to the desired option by turning the knob and enter the schedule programming by briefly pressing the knob (this erases the current schedule setting).



Schedule programming is done by marking periods of time for which the Day heating operation is requested. The marking bar is shown at the bottom of the display, each hour can be either marked or unmarked. You mark or unmark by turning the knob. The mark/unmark mode is displayed by ☼/◑ symbols, the currently programmed hour is shown on the display (00 to 23). Switching between mark/unmark modes is done by pressing the knob (this applies when turning clockwise, turning the knob anti-clockwise always switches to unmark mode).

Turning the knob to the rightmost position (following hour 23) will display an **OK** option. Pressing the knob will then finish programming.

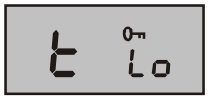
4. M4 – Service menu

This menu allows for the configuration of parameters which usually stay fixed during normal operation. When the service menu is entered, the 🔑 symbol is shown on the display. The menu contains 9 items (they can be scrolled through by turning the knob). Each of the first 7 items corresponds to a parameter which can be configured in a standard way (by pressing the knob, turning the knob until the desired value is displayed, and re-pressing the knob).

The ***SPAN*** parameter allows you to configure the hysteresis – the accuracy to which the temperature is regulated. One of the following accuracy ranges can be selected: ±0.1˚C, ±0.2˚C or ±0.5˚C (the factory default setting is ±0.2˚C).

Example: *If the accuracy is adjusted to ±0.5˚C and the temperature is set to 24˚C, the thermostat switches the heating on when the temperature drops below 23.5˚C and it switches it off if the temperature goes above 24.5˚C. In reality the temperature scatter can be slightly higher because of the temperature persistence of the room.*

Warning: too high an accuracy can cause the heating to turn on and off too frequently.



The ***t Lo*** parameter is the lower limit to which the economical temperature can be set. In addition, any drop in temperature under *t Lo* causes a "heat to t Lo temperature" signal to be transmitted.

The ***t Hi*** parameter is the upper limit to which the Comfortable temperature can be set.

The ***AL Lo*** corresponds to the **critically low** temperature. Any drop in temperature under *AL Lo* causes a Panic signal to be sent to the receiver (reporting a frost threat).

AL Hi corresponds to the **critically high** temperature. Any rise in temperature above *AL Hi* causes a Fire signal to be sent to the receiver.

The ***Corr*** parameter allows for a correction of possible temperature measurement offsets. The range of adjustable corrections is ±1°C.

This parameter allows you to enable or disable thermostat adaptive mode. If enabled, the thermostat switches on in advance according to the temperature persistence of the heating system.

Selecting this item and pressing and holding the knob for 5 seconds resets the thermostat to the factory default settings.

By selecting **OK** and pressing the knob the menu is escaped from.

The parameter ranges are restricted according to the following table:

Parameter	Adjustment range	Factory default	Description
SPAN	0.1°C;0.2°C;0.5°C	0.2°C	Hysteresis for switching
t Lo	+6°C to +40°C*	6°C	Lower limit of ◑
t Hi	+6°C to +40°C*	40°C	Upper limit of ☼
AL Lo	–9°C to +20°C	3°C	Panic alarm
AL Hi	+30°C to +70°C	60°C	Fire alarm
Corr	±1°C	0	Correction
Auto	On/OFF	On	Adaptive mode
◑	+6°C to +40°C	18°C	Economical temperature
☼	+6°C to +40°C	21°C	Comfortable temperature

* ***t Lo*** to ***t Hi*** and ◑ to ☼ must be valid ranges: ***t Lo*** must not be greater than ***t Hi*** and ◑ must not be greater than ☼.

Party mode

You can put the thermostat into party mode by briefly pressing the knob (indicated by symbols 👆 and ☼ together). After then the thermostat maintains the Comfortable temperature increased by 2°C.

Party mode terminates whenever a switch to Economy temperature regulation occurs (whether manual or scheduled).

Displaying the set temperature

When not being handled, the thermostat shows the current temperature in the room. If you want to display the temperature which is set for the current time, **turn the knob**. The set temperature will then flash on the display for 3 seconds.

Battery replacement

Replace the battery when the low-battery symbol is displayed (or the thermostat stops working). If the thermostat is enrolled to the control panel, then a low battery will be indicated by the control panel (to the user and installer). Only use AA 1.5V alkaline batteries.

Integration into the OASiS system

- The thermostat can be **enrolled to a control panel as a detector.** If the temperature decreases below ***AL Lo*** a **panic alarm** will be triggered = **frost threat** (heating failure).
- If the temperature exceeds ***AL Hi*** then a **fire alarm** will be triggered.
- An AC-82 receiving unit has two output relays (X and Y). Thermostats can be enrolled separately to each relay in order to **control two independent heating circuits.**
- **To operate a heating system the Oasis control panel** can also be enrolled (sequence 299) to the same relay of the receiving unit as the thermostat is enrolled to. A thermostat enrolled to the X relay **can be operated via the PGX programmable output,** and a thermostat enrolled to the **Y** relay operated via **PGY.** If the programmable **output of the control panel is switched on,** the thermostat maintains the programmed temperature. If the control panel's output is **switched off** the thermostat only triggers heating if the temperature drops **below *t Lo***.
- **To operate the heating,** RC-80 or RC-88 **remote controls** can also be enrolled to a receiving unit (AC-82). The heating can be **switched on** by remote controls to heat to the desired temperature and also **switched off where it only heats when the temperature is below *t Lo***.
- **To disable heating when windows are open** JA-80M or JA-82M **detectors** can also be enrolled to the same relay as the thermostat is enrolled to**.** If the windows are closed it **heats** to the desired temperature and if windows are open it **heats only when the temperature is below *t Lo***.
- **Up to 8 thermostats** can be enrolled to a single relay. If at least one thermostat transmits a heat command then the relay will be switched on.

Specifications

Power supply:	*1x AA 1.5 V alkaline battery*
Battery lifetime	*typically 1 year*
Temperature measurement:	*+6°C to +40 ˚C*
Temperature accuracy:	*adjustable: ± 0.1, ± 0.2 or ± 0.5 ˚C*
Freeze alarm (panic transmission) temperature threshold:	*< AL Lo configurable from –9°C to +20°C*
Fire alarm temperature threshold:	*> AL Hi configurable from +30°C to +70°C*
Operational frequency:	*868 MHz, Oasis protocol*
Operational radio range:	*up to 100 m (open area)*
Operational temperature range:	*-10°C to + 70°C (low humidity)*
Dimensions:	*66 x 90 x 22 mm*
Complies with	*ETSI EN 300220, EN50130-4, EN55022, and EN 60950-1*
Can be operated according to	*ERC REC 70-03*

CE Jablotron Ltd. hereby declares that the TP-83 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. The original of the conformity assessment can be found on the web site www.jablotron.com, Technical Support section.

Note: Dispose of batteries safely depending on battery type and local regulations. Although this product does not contain any harmful materials we suggest you return the product to the dealer or directly to the manufacturer after use.

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